

## Lesson 5-2: Exploring Similar Polygons

### Hands-On Activity: *Solid Gold*

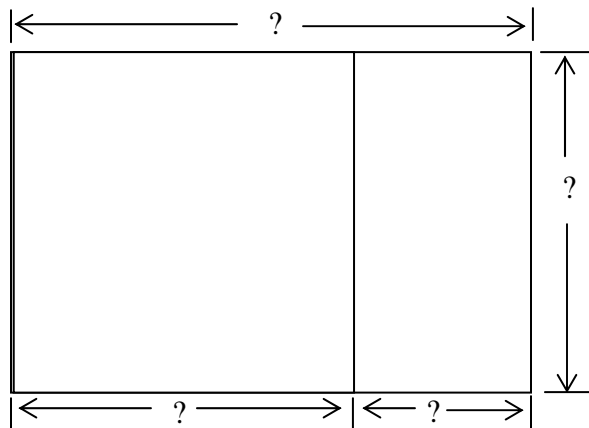


#### Objective:

From the given information, determine the length of the original rectangle.

#### Given:

A square with sides of length 1 is removed from the end of a rectangle with width 1 and length  $x$ . If the resulting rectangle is similar to the original rectangle, find  $x$ .



#### Procedure:

1. Draw and label the width and length of the original rectangle.
2. Mark off the square on one end and label its length and width.
3. Label the length and width of the rectangle left over after removing the square.
4. What does it mean when we say the original rectangle is similar to the resulting rectangle?  
(Hint: ratio, proportions)
5. What are you asked to find?
6. Can you use a ratio from the similarity to solve for  $x$ ?  
(Hint: The equation found from the proportion can be solved using the quadratic formula and only one possible solution exists.)